

## CLAIMS

I claim:

1. A musical instrument string, comprising a core and a polymer vapor surface treatment adhered to a pre-selected portion of the surface of said core.

5 2. A musical instrument string, comprising a core and a polymer condensed and nucleated on a pre-selected portion of the surface of said core.

3. A musical instrument string as in Claim 1, wherein said pre-selected portion is substantially the entire length of said core.

10 4. A musical instrument string as in Claim 2, wherein said pre-selected portion is substantially the entire length of said core.

5. A musical instrument string as in Claim 1 wherein said polymer vapor surface treatment comprises PTFE.

6. A musical instrument string as in Claim 2 wherein said polymer condensed and nucleated on said surface is PTFE.

15 7. A musical instrument string comprising a surface treatment as in Claim 5 wherein said polymer material is vapor deposited PTFE through plasma sputter deposition, ion beam sputtering, laser deposition, or hot filament or plasma chemical vapor deposition.

8. A method of producing a musical instrument string having a polymeric surface treatment, comprising the steps of:  
cleaning the musical instrument string to be treated;

providing a suitable vapor source;

5 placing said musical instrument string and said vapor source in a vacuum tight vessel;

reducing the pressure in said vessel to a base pressure of about 10<sup>-5</sup> Torr or less; and

while maintaining a vacuum of about 20 x 10<sup>-3</sup> Torr pressure and

10 applying power to said source in said vessel, cycling the power to said source on and off until a desired thickness of PTFE coating is condensed and nucleated on said musical instrument string.

9. A polymeric treatment applied to a musical instrument string, produced by the process of claim 8.

15 10. A musical instrument string having a polymeric surface treatment wherein said treatment is applied according to the method of claim 8.

11. A musical instrument string as in Claim 10 wherein said musical instrument string is a core.

12. A musical instrument string as in Claim 10 wherein said musical instrument string is a wound string, comprising a core and at least one strand wound around said core.

13. A musical instrument string, comprising a core and at least one strand wound around said core, and a polymer vapor surface treatment adhered to a pre-selected portion of the surface of said strand wound around said core.

14. A musical instrument string, comprising a core and at least one strand wound around said core, and a polymer condensed and nucleated on a pre-selected portion of the surface of said strand wound around said core.

15. A musical instrument string as in Claim 13, wherein said pre-selected portion is substantially the entire length of said strand wound around said core.

16. A musical instrument string as in Claim 14, wherein said pre-selected portion is substantially the entire length of said strand wound around said core.

17. A musical instrument string as in Claim 13 wherein said polymer vapor surface treatment comprises PTFE.

18. A musical instrument string as in Claim 14 wherein said polymer condensed and nucleated on said surface is PTFE.

19. A musical instrument string comprising a surface treatment as in Claim 17 wherein said polymer material is vapor deposited PTFE through plasma sputter deposition, ion beam sputtering, laser deposition, or hot filament or plasma chemical vapor deposition.

20. A musical instrument string, comprising a core and at least one strand wound around said core, and a polymer vapor surface treatment adhered to a pre-selected portion of the surface of both said core and said strand wound around said core.

20. A musical instrument string, comprising a core and at least one strand wound around said core, and a polymer vapor surface treatment adhered to a pre-selected portion of the surface of both said core and said strand wound around said core.